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POWERINE REFINERY

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QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT

ENSR CONSULTING AND ENGINEERING

(Formerly ERT)

April 1989

Document Number 5500-002-101

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**QUARTERLY GROUNDWATER MONITORING AND
SAMPLING REPORT FOR THE**

POWERINE REFINERY

April 1989

PREPARED FOR

**Powerine Oil Company
P.O. Box 2108
Santa Fe Springs, California 90670**

By

**ENSR CONSULTING AND ENGINEERING
(Formerly ERT, Inc.)
19782 MacArthur Boulevard, Suite 365
Irvine, California 92715**

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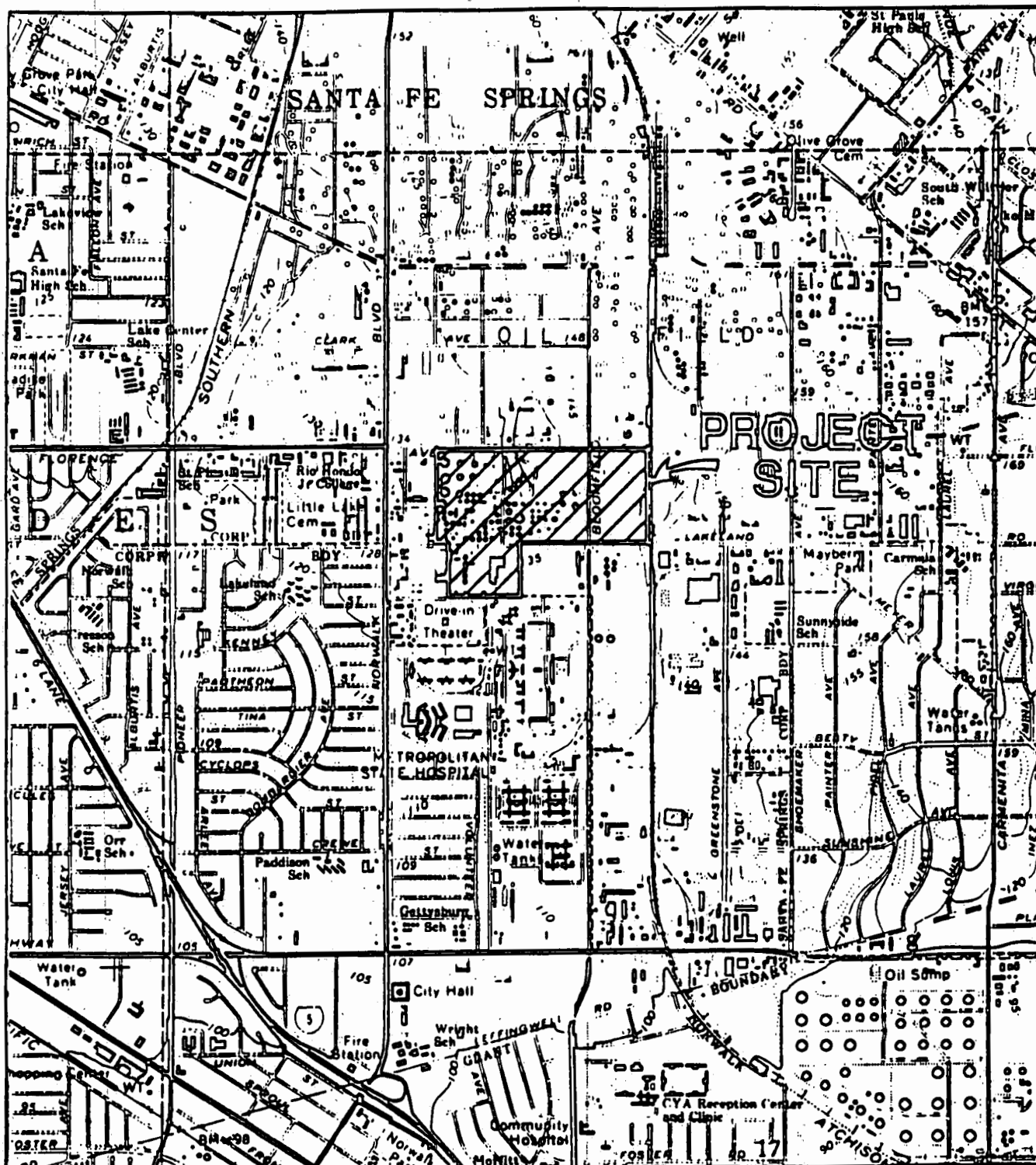
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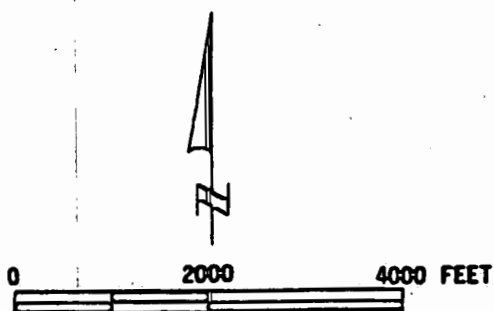
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1.0 INTRODUCTION

ENSR Consulting and Engineering (Formerly ERT, Inc.) personnel measured water levels in thirteen (13) monitoring wells on February 28, 1989 and collected water samples from ten (10) monitoring wells on March 1, and March 2, 1989 at the Powerine Oil Company refinery located at 12354 Lakeland Road, Santa Fe Springs, California (Figures 1 and 2). Groundwater samples were analyzed to evaluate the concentrations of purgeable halocarbon and purgeable volatile organic compounds. This work was performed to comply with the requirements of the Regional Water Quality Control Board, Los Angeles Region (RWQCB) for quarterly monitoring, sampling, and analytical testing of perched groundwater beneath the refinery. This report summarizes the field procedures, laboratory analyses, and analytical results for the first quarter of 1989.



BASE MAP FROM U.S.G.S. 7 1/2 MINUTE SERIES (TOPOGRAPHIC), CHITTIER QUADRANGLE



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FIGURE 1
PROJECT SITE LOCATION MAP

DRAWN BY:	DATE:	PROJECT NO.:
CHK'D BY: <i>oo</i>	REVISED:	DWG. NO.:

FX-9 Wells

2.0 GROUNDWATER MONITORING AND SAMPLING

2.1 Water-Level Monitoring

Water-level monitoring was performed on February 28, 1989 using a Solinst water level meter in wells containing water only, and a stainless steel tape, water gauging paste, and gasoline gauging paste in wells containing free product (MW-501, MW-504). Monitoring equipment was decontaminated following each measurement. The decontamination procedure consisted of a tap water rinse, a thorough scrubbing using a non-phosphatic detergent in tap water, a second tap water rinse, and a final rinse using distilled water obtained from a State-certified analytical laboratory.

Groundwater monitoring results are summarized in Table 1 and are illustrated on the groundwater contour map in Figure 3. Groundwater elevations ranged from 34.44 feet above MSL in MW-501 to 52.45 feet above MSL in MW-104. The water table gradient slopes southwesterly across the site.

As in previous quarters, monitoring well MW-202 was observed to be dry. Monitoring well MW-504 contained 2.75 feet of free product and, MW-501 contained .75 feet of free product on the upper surface of the perched aquifer. Therefore, water samples were not extracted from these monitoring wells. However, it must be noted that the elevation of the recovery system in MW-504 has been adjusted, and will be monitored on a regular basis to ensure that free product recovery is maximized. The depth to groundwater was not measured in monitoring well MW-102 because the well was reportedly destroyed sometime prior to July, 1987.

TABLE 1
SUMMARY OF WATER-LEVEL MONITORING DATA

MW No.	Date	Elevation Top of Casing (feet,MSL)	Depth to Water (feet)	Water Level Elevations (feet,MSL)	Free Product (feet)
101	2/28/89	134.98	90.28	44.70	ND
102	2/28/89	134.81	a	a	a
103	2/28/89	136.95	95.68	41.27	ND
104	2/28/89	141.60	89.15	52.45	ND
201	2/28/89	132.91	92.84	40.07	ND
202	2/28/89	137.89	b	b	ND
203	2/28/89	143.89	97.15	46.74	ND
204	2/28/89	140.14	97.53	42.62	ND
205	2/28/89	138.17	92.88	45.29	ND
206	2/28/89	129.93	95.20	34.73	ND
501	2/28/89	128.70	94.81	33.44	.75 (.70) ^c
502	2/28/89	131.19	96.75	34.44	ND
503	2/28/89	131.43	95.18	36.25	ND
504	2/28/89	133.83	96.25	39.59	2.75 ^c (1.87) ^d

KEY

ND = Not Detected

a = Destroyed

b = Dry Well

c = Thickness of free product, previous quarter

d = Increase may be contributed to the free product recovery system being disconnected

MW = Monitoring Well

FX-9 Wells

2.2 Groundwater Sampling

Ten (10) monitoring wells were sampled on February 28, March 1 and March 2, 1989. Sampling began with monitoring wells MW-101, which had a very small volume of water and therefore could not be purged, and MW-103, which were purged with a hand bailer because the water volume in these wells was insufficient to use an electrical submersible pump. The remaining monitoring wells were sampled starting with monitoring well MW-104, which contained water with the lowest reported concentrations of hydrocarbon compounds, and proceeded sequentially to wells with progressively higher reported concentrations. This sampling sequence was followed in order to minimize the potential for cross contamination between wells. The production well (P-6 on Figure 2) was not sampled since its associated holding tank remained inoperable during the time of monitoring and sampling.

Before a sample was extracted, each well was purged of approximately four (4) well volumes of water using either a 1/3-horsepower Grundfos submersible pump, or a Teflon hand bailer. Prior to purging of the monitoring wells with the submersible pump, a fire permit was obtained from refinery safety personnel to operated the gasoline powered generator at the well head. Upon removal of four (4) well volumes, the water's pH, temperature, and conductivity were measured and recorded. Purged water was discharged into 55-gallon drums to be later disposed of by refinery personnel.

After purging, water samples were extracted from the monitoring wells using a decontaminated Teflon bailer. Samples were placed into two (2) 40-milliliter VOA vials. The VOA vials are clear and pretreated with HCl, which inhibits the biodegradation of volatile aromatic compounds. All samples were properly labeled, sealed, and immediately placed on ice in a portable cooler. In addition, two (2) sample blanks consisting of distilled water obtained from a State-certified laboratory were collected (MW-001, MW-002). These sample blanks were extracted

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from the same Teflon bailer used to samples the monitoring wells. Monitoring well MW-501 and MW-504 contained free product and, therefore, were not sampled.

All equipment used to purge and sample the monitoring wells was decontaminated after each well was sampled. The decontamination procedure consisted of a tap water rinse, a thorough scrubbing in tap water and non-phosphatic detergent, a second tap water rinse, and a final rinse using distilled water.

A summary of the data recorded while sampling the monitoring wells is presented in Table 2. Conductivity values ranged from 1,800 $\mu\text{mhos/cm}$ in MW-503 to 4,670 $\mu\text{mhos/cm}$ in MW-101 and, in general, demonstrated decreasing values across the site from the northeast to the southwest. The measurements of water pH ranged from 6.0 to 7.0.

TABLE 2
SUMMARY OF GROUNDWATER SAMPLING DATA

<u>MW No.</u>	<u>Time</u>	<u>Purge Method</u>	<u>Volume Purged (gals.)</u>	<u>Temp. (°C)</u>	<u>pH</u>	<u>Electrical Conductivity (umhos/cm)</u>	<u>Water Turb.</u>
101	02/28/89 (14:45)	HB	a	b	b	4670	gray, silty, cloudy
103	02/28/89 (16:00)	HB	1.0	23	6.7	2610	gray/ green, cloudy
104	02/28/89 (10:45)	SP	20	24	6.3	4580	lt.gray, sl. cloudy
201	03/02/89 (10:30)	SP	20	22	6.5	2140	clean/ lt.gray, sl. cloudy
202	b	b	b	b	b	b	b
203	03/01/89 (13:50)	SP	25	22	6.3	3540	lt.gray, sl. cloudy
204	03/01/89 (12:00)	SP	18	24	6.2	2110	lt.gray, cloudy,
205	03/01/89 (15:00)	SP	20	23	7.0	2135	lt.gray, sl. cloudy
206	03/02/89 (12:15)	SP	18	22	6.0	2100	lt.gray, cloudy, silty,
501	c	c	c	c	c	c	c
502	03/02/89 (13:15)	SP	25	24	6.7	2510	clear/ sl. cloudy

Table 2 (continued)

Summary of Groundwater Sampling Data

MW No.	Time	Purge Method	Volume Purged (gals.)	Temp. (°C)	pH	Electrical Conductivity (µmhos/cm)	Water Turb.
503	03/02/89 (11:15)	SP	45	23	6.1	1800	clear/ sl. cloudy
504	c	c	c	c	c	c	c

KEY

MW = Monitoring well
 a = purge not possible due to insufficient water in well
 b = Insufficient water in well
 c = Not sampled due to presence of free product in well
 HB = Hand bailer
 SP = Submersible pump
 sl. = Slightly
 v = Very
 Turb= Turbidity

3.0 LABORATORY ANALYSIS

All samples were submitted to Enseco/Chemical Research Laboratories, Inc., a California-certified analytical laboratory, for analysis using EPA Test Methods 601 and 624. Monitoring well MW-101 was analyzed using Method 601 only. This was the result of insufficient water volume in the well, therefore making further sample extraction unfeasible. Standard chain-of-custody procedures and documents were utilized (Appendix A). Test methods were performed following EPA monitored quality assurance/quality control procedures assuring results of laboratory analyses.

3.1 EPA Test Method 601

EPA Method 601 is a purge and trap gas chromatographic method applicable to the determination of purgeable halocarbons from water samples as prescribed by 40 CFR 136.1. An inert gas is bubbled through a 5-ml water sample contained in a specifically-designed purging chamber and maintained at ambient temperature from the aqueous phase to the water vapor phase. The vapor is swept through a sorbent trap where the halocarbons are trapped. After purging is completed, the trap is heated and backflushed with the inert gas to desorb the halocarbons which are then detected with a halide specific detector. Two field reagent blanks were prepared from reagent water and carried through the sampling and handling protocol to check for possible contamination. Standard operating procedures require that compound identification should be supported by at least one additional qualitative technique, such as EPA Method 624.

3.2 EPA Test Method 624

EPA method 624 is a purge and trap gas chromatographic/mass spectrometer (GC/MS) method applicable to the determination of

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purgeable organics from water samples, and is also prescribed by 40 CFR 136.1. An inert gas is bubbled through a 5-ml sample contained in a specifically designed purging chamber at ambient temperature. The purgeables are efficiently transferred from the aqueous phase to the vapor phase. The vapor is swept through a sorbent column where the purgeables are trapped. After purging is completed, the sorbent column is heated and backflushed with the inert gas to desorb the purgeables into a gas chromatographic column. The gas chromatograph is temperature programmed to separate the purgeables which are then detected with a mass spectrometer. Two field reagent blanks were prepared from reagent water and carried through the sampling and handling protocol to check for possible contamination.

4.0 ANALYTICAL RESULTS

All analytical results are presented on the Laboratory Reports in Appendix B. Results of analyses for benzene, toluene, ethylbenzene, and total xylenes (BTEX) performed for this and the previous six (6) quarterly reports are summarized on Table 3 and graphically exhibited in Figures 4, 5, 6, and 7. Results of analyses for purgeable halocarbons are summarized on Table 4. In water samples extracted from the ten (10) monitoring wells, benzene concentrations ranged from non-detected (less than 5 $\mu\text{g/L}$) to 5,300 $\mu\text{g/L}$, toluene concentrations ranged from non-detected (less than 5 $\mu\text{g/L}$) to 3,200 $\mu\text{g/L}$, ethylbenzene concentrations ranged from non-detected (less than 5 $\mu\text{g/L}$) to 2,400 $\mu\text{g/L}$, and concentrations of total xylenes ranged from non-detected (less than 5 $\mu\text{g/L}$) to 12,000 $\mu\text{g/L}$. BTEX concentrations did not exceed the method detection limits (5 $\mu\text{g/L}$) in sample blanks MW-001 and MW-002.

Concentrations of volatile organic compounds were highest in water samples collected from monitoring wells MW-206, MW-502, MW-503, MW-103, and MW-201, respectively. Benzene concentrations in these samples were 2,700 $\mu\text{g/L}$, 5,300 $\mu\text{g/L}$, 400 $\mu\text{g/L}$, 940 $\mu\text{g/L}$, and 210 $\mu\text{g/L}$, respectively. Toluene concentrations of the samples collected in MW-201, MW-503, MW-502, and MW-206 ranged from 27 $\mu\text{g/L}$ to 3,200 $\mu\text{g/L}$; ethylbenzene concentrations ranged from 24 $\mu\text{g/L}$ to 2,400 $\mu\text{g/L}$; and total xylene concentrations ranged from 47 $\mu\text{g/L}$ to 12,000 $\mu\text{g/L}$.

The concentrations of other volatile organic compounds detected in water samples analyzed this quarter were relatively low. The previous quarter (January 1989) indicated concentrations of 55,000 $\mu\text{g/L}$ of 1,2-Dichloroethane detected in the sample from MW-502. This is believed to have been a laboratory error, as this quarters samples contained concentrations of ranging from non-detected (<1 $\mu\text{g/L}$) to 4 $\mu\text{g/L}$ of 1,2-Dichloroethane. Continued sampling of site wells will monitor the occurrence of this compound in site groundwater.

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Wells with previous acetone concentrations remained at non-detected (detection levels ranging from 5 $\mu\text{g/L}$ to 500 $\mu\text{g/L}$) for the quarter (Table 5). The production well P-6 was not available for sampling; therefore, any changes in acetone concentrations occurring during the quarter could not be evaluated.

TABLE 3
SUMMARY OF ANALYTICAL TEST RESULTS -
VOLATILE ORGANIC COMPOUNDS
(Values in $\mu\text{g/L}$)

MW No.	Date	<u>Benzene</u>	<u>Ethyl benzene</u>	<u>Toluene</u>	<u>Total Xylene</u>
101	Mar. 89	NA	NA	NA	NA
	Dec. 88	490	49	28	ND<20
	Sept. 88	310	34	10	13
	June 88	620	ND<50	ND<50	100
	Mar. 88	340	ND<100	ND<100	ND<100
	Dec. 87	140	ND<5	ND<5	ND<5
	Sept. 87	340	37	ND<30	ND<30
103	Mar. 89	940	ND<20	ND<20	ND<20
	Dec. 88	370	ND<5	ND<5	ND<5
	Sept. 88	300	ND<5	ND<5	8
	June 88	970	ND<50	74	ND<50
	Mar. 88	ND<5	ND<5	ND<5	ND<5
	Dec. 87	12	ND<5	ND<5	ND<5
	Sept. 87	120	ND<5	ND<5	ND<5

TABLE 3 (continued)
SUMMARY OF ANALYTICAL TEST RESULTS -
VOLATILE ORGANIC COMPOUNDS
(Values in $\mu\text{g/L}$)

MW No.	Date	Benzene	Ethyl benzene	Toluene	Total Xylene
104	Mar. 89	ND<5	ND<5	ND<5	ND<5
	Dec. 88	ND<5	ND<5	ND<5	ND<5
	Sept. 88	ND<5	ND<5	ND<5	ND<5
	June 88	ND<5	ND<5	ND<5	ND<5
	Mar. 88	110	23	68	17
	Dec. 87	ND<5	ND<5	ND<5	ND<5
	Sept. 87	ND<5	ND<5	ND<5	ND<5
201	Mar. 89	210	24	27	47
	Dec. 88	420	19	65	100
	Sept. 88	520	110	210	400
	June 88	1000	ND<50	150	250
	Mar. 88	5600	260	880	1400
	Dec. 87	290	ND<5	6	142
	Sept. 87	120	9	12	12

TABLE 3 (continued)
SUMMARY OF ANALYTICAL TEST RESULTS -
VOLATILE ORGANIC COMPOUNDS
(Values in $\mu\text{g/L}$)

MW No.	Date	Benzene	Ethyl benzene	Toluene	Total Xylene
203	Mar. 89	110	ND<5	ND<5	ND<5
	Dec. 88	64	ND<5	ND<5	ND<5
	Sept. 88	76	ND<5	ND<5	ND<5
	June 88	46	ND<5	ND<5	ND<5
	Mar. 88	103	ND<5	ND<5	ND<5
	Dec. 87	120	ND<5	ND<1	ND<1
	Sept. 87	92	ND<5	ND<5	ND<5
204	Mar. 89	39	ND<5	ND<5	ND<5
	Dec. 88	33	ND<5	ND<5	ND<5
	Sept. 88	6	ND<5	ND<5	ND<5
	June 88	19	ND<5	ND<5	ND<5
	Mar. 88	120	ND<20	ND<20	ND<20
	Dec. 87	9	ND<5	ND<5	ND<5
	Sept. 87	18	ND<5	ND<5	ND<5

TABLE 3 (continued)
SUMMARY OF ANALYTICAL TEST RESULTS -
VOLATILE ORGANIC COMPOUNDS
(Values in $\mu\text{g/L}$)

MW No.	Date	Benzene	Ethyl benzene	Toluene	Total Xylene
205	Mar. 89	40	ND<5	ND<5	ND<5
	Dec. 88	120	ND<5	ND<5	ND<5
	Sept. 88	27	ND<5	ND<5	ND<5
	June 88	13	ND<5	ND<5	ND<5
	Mar. 88	74	ND<5	ND<5	8
	Dec. 87	ND<5	ND<5	ND<5	ND<5
	Sept. 87	ND<5	ND<5	ND<5	ND<5
206	Mar. 89	2700	2400	3200	12000
	Dec. 88	4300	2100	920	5500
	Sept. 88	4200	2000	1000	6600
	June 88	5800	2100	2400	4900
	Mar. 88	6400	3400	3900	7300
	Dec. 87	7400	900	2300	5000
	Sept. 87	4100	1300	930	4000

TABLE 3 (continued)
SUMMARY OF ANALYTICAL TEST RESULTS -
VOLATILE ORGANIC COMPOUNDS
(Values in $\mu\text{g/L}$)

MW No.	Date	Benzene	Ethyl benzene	Toluene	Total Xylene
501	Mar. 89		*Free product present*		
	Dec. 88		*Free product present*		
	Sept. 88		*Free product present*		
	June 88		*Free product present*		
	Mar. 88	4900	11000	9100	8200
	Dec. 87	8300	400	2000	1100
	Sept. 87	1400	170	ND<50	ND<50
502	Mar. 89	5300	1900	1200	7100
	Dec. 88	6500	1500	860	5500
	Sept. 88	13000	2800	1800	12000
	June 88	950	62	79	16
	Mar. 88	3600	120	400	2700
	Dec. 87	13000	900	1200	4800
	Sept. 87	8400	1300	1700	5500

TABLE 3 (continued)
SUMMARY OF ANALYTICAL TEST RESULTS -
VOLATILE ORGANIC COMPOUNDS
(Values in $\mu\text{g/L}$)

MW No.	Date	Benzene	Ethyl benzene	Toluene	Total Xylene
503	Mar. 89	400	360	190	750
	Dec. 88	1500	380	570	960
	Sept. 88	800	300	280	910
	June 88	600	340	140	600
	Mar. 88	2700	1300	1300	2400
	Dec. 87	220	ND<10	44	660
	Sept. 87	53	280	76	390
P-6	Mar. 89	-	Not operational		
	Dec. 88	-	Not operational		
	Sept. 88	-	Not operational		
001*	Mar. 89	ND<5	ND<5	ND<5	ND<5
002*	Mar. 89	ND<5	ND<5	ND<5	ND<5

KEY

MW = Monitoring Well

NA = Not analyzed this quarter, because of insufficient well volume.

ND = This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.

* = Sample Blank

FX-9 Wells

FX-9 Wells

FX-9 Wells

FX-9 Wells

TABLE 4
SUMMARY OF ANALYTICAL TEST RESULTS -
PURGEABLE HALOCARBON COMPOUNDS

<u>Monitoring Well Number</u>	<u>Concentration Compounds Detected</u>	<u>($\mu\text{g/L}$)</u>
101*	None Detected	
103*	None Detected	
104	None Detected	
201*	None Detected	
203	trans-1,2-Dichloroethene	35
204	trans-1,2-Dichloroethene 1,2-Dichloroethane	1 4
205	None Detected	
206**	None Detected	
502*	None Detected	
503*	None Detected	
001 ^a	Trichloroethene Tetrachloroethene	2 10
002 ^a	Chloroform	2

KEY

* A higher than normal detection limits of 10 $\mu\text{g/L}$ or 20 $\mu\text{g/L}$ was used due to matrix interference.

** A higher than normal detection limit of 50 $\mu\text{g/L}$ was used due to matrix interference.

a = Sample blank

TABLE 5
SUMMARY OF ACETONE CONCENTRATIONS
EPA METHOD 624
(Values in $\mu\text{g/L}$)

<u>MW No.</u>	<u>3/89</u>	<u>12/88</u>	<u>9/88</u>	<u>6/88</u>	<u>3/88</u>
101	NA	ND<50	81	870	ND<200
103	ND<50	ND<10	ND<10	1,100	50
104	ND<10	ND<10	ND<10	ND<10	33
201	ND<10	ND<10	ND<100	1,700	ND<200
203	ND<10	ND<10	20	200	71
204	ND<10	ND<10	ND<10	ND<10	400
205	ND<10	ND<10	ND<10	ND<10	190
206	ND<500	ND<1000	3,000	2,500	ND<500
502	ND<500	ND<500	ND<500	ND<10	ND<200
503	ND<20	ND<200	ND<100	1,700	1,900
P-6	NA	NA	NA	NA	NA
002*	ND<10	ND<10	35	ND<10	ND<10

KEY

NA = Not analyzed (Well could not be sampled)

ND = Not detected.

* = Sample blank

5.0 CONCLUSIONS

The monitoring and analytical results derived in the first quarter of 1988 reveal several deviations from previous quarters (Tables 3, 4, and 5). Analysis of the most recent results compared with the results from the previous quarter (January, 1989) indicate the following:

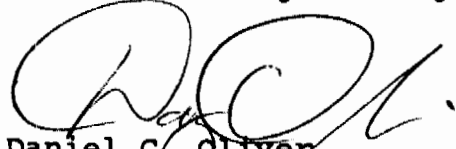
- o Free product thickness in monitoring well MW-501 slightly increased by .05 feet from .7 feet to .75 feet.
- o Free product thickness in monitoring well MW-504 increased by .88 feet from 1.87 feet to 2.75 feet. The elevation of the free product recovery system in MW-504 has been adjusted, and will be monitored on a regular basis in an effort to reduce the free product thickness.
- o Benzene concentrations remained non-detected in MW-104; decreased slightly in MW-201 and MW-205 and significantly in MW-206, MW-502, and MW-503; and increased in MW-103, MW-203, and MW-204.
- o Toluene concentrations remained non-detected in MW-103, MW-104, MW-203, MW-204, and MW-205; decreased in MW-201 and MW-503; and increased in MW-206 and MW-502.
- o Ethylbenzene concentrations remained non-detected in MW-103, MW-104, MW-203, MW-204, and MW-205; decreased in MW-206 and MW-503; and increased in MW-201 and MW-502.
- o Total xylenes concentrations remained non-detected in MW-103, MW-104, MW-203, MW-204, and MW-205; decreased in MW-201; and increased in MW-206, MW-502, and MW-503.
- o Acetone concentrations remained at non-detected levels in all wells.
- o In general, analytical results of water samples from monitoring wells MW-104, MW-201, MW-203, MW-204, and MW-205 remain consistent with the results from previous quarters.
- o Analytical results of water samples from monitoring wells MW-201 and MW-503 exhibited a decrease in overall BTEX levels.
- o Analytical results of water samples from monitoring wells MW-206 and MW-502 exhibited a slight increase in overall BTEX levels.

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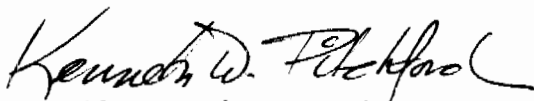
- o Analytical results from the previous quarter (January 1989) indicating high concentrations of 1,2-Dichloroethane in MW-502 are interpreted to be an anomaly as concentrations decreased to non-detected levels during this quarter.

Respectfully submitted,

ENSR Consulting and Engineering



Daniel C. Oliver
Project Manager



Kenneth W. Pitchford, R.G. 4135
Senior Hydrogeologist

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APPENDIX A
CHAIN-OF-CUSTODY DOCUMENTS

CHAIN OF CUSTODY RECORD

Client/Project Name <i>Quarterly Sampling</i>			Project Location <i>SANTA FE SPRINGS, CA</i>			ANALYSES <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">601</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">624</div> </div>						
Project No. <i>5500-002-101</i>			Field Logbook No.									
Sampler: (Signature) <i>Bradley Strach</i>			Chain of Custody Tape No.									
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample							REMARKS	
<i>MW-101</i>	<i>2/28/89</i>	<i>15:20</i>		<i>Liquid</i>	<i>X</i>	<i>X</i>						<i>Only one vial</i>
<i>MW-103</i>	<i>2/28/89</i>	<i>16:20</i>			<i>X</i>	<i>X</i>						
<i>MW-104</i>	<i>3/1/89</i>	<i>11:31</i>			<i>X</i>	<i>X</i>						
<i>MW-204</i>	<i>3/1/89</i>	<i>12:23</i>			<i>X</i>	<i>X</i>						
<i>MW-203</i>	<i>3/1/89</i>	<i>14:39</i>			<i>X</i>	<i>X</i>						
<i>MW-001</i>	<i>3/1/89</i>	<i>14:45</i>			<i>X</i>	<i>X</i>						
<i>MW-205</i>	<i>3/1/89</i>	<i>15:29</i>		<i>Liquid</i>	<i>X</i>	<i>X</i>						
Relinquished by: (Signature) <i>Bradley Strach</i>				Date <i>3/1/89</i>	Time <i>18:20</i>	Received by: (Signature) _____				Date	Time	
Relinquished by: (Signature) _____				Date	Time	Received by: (Signature) _____				Date	Time	
Relinquished by: (Signature) _____				Date	Time	Received for Laboratory: (Signature) <i>[Signature]</i>				Date <i>3/1/89</i>	Time <i>16:20</i>	
Sample Disposal Method:				Disposed of by: (Signature) _____				Date	Time			
SAMPLE COLLECTOR <i>BRADLEY STRACH</i> <i>ENSR Consulting & Engineering</i> <i>15782 MAC ARTHUR BLVD, STE 365</i> <i>IRVINE, CA 92715</i> <i>(714) 476-0321</i>				ANALYTICAL LABORATORY <i>ENSECO/CLL</i> <i>7440 Lincoln Way</i> <i>GARDEN GROVE, CA</i>						ERT		
										No		

CHAIN OF CUSTODY RECORD

Client/Project Name <i>Quarterly Sampling</i>			Project Location <i>Santa Fe Springs, CA</i>			ANALYSES					
Project No. <i>5500-002-101</i>			Field Logbook No.			<i>601</i> <i>624</i>					
Sampler: (Signature) <i>Bradley Strain</i>			Chain of Custody Tape No.								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample							
MW-201	3/2/89	10:56		Liquid	X	X					
MW-503		11:48		↓	X	X					
MW-206		12:58			X	X					
MW-502	↓	13:41		↓	X	X					
MW-002	3/2/89	13:50		Liquid	X	X					
Relinquished by: (Signature) <i>Bradley Strain</i>				Date 3/2/89	Time 13:35	Received by: (Signature)				Date	Time
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <i>[Signature]</i>				Date 3/2/89	Time 14:35
Sample Disposal Method:				Disposed of by: (Signature)				Date	Time		
SAMPLE COLLECTOR BRADLEY R. STRAIN ENR Consulting & Engineering 15782 MacArthur Blvd, Ste 265 IRVINE, CA 92615 (714) 476-0321				ANALYTICAL LABORATORY ENVUSCO/CAL 7440 Lincoln Way GARDEN GROVE, CA				ERT No			

APPENDIX B
LABORATORY REPORTS

Enseco - CRL / South Coast

7440 Lincoln Way • Garden Grove, CA 92641
 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL
 FAX: (714) 891-5917

March 15, 1989

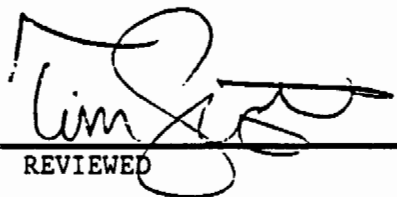
ENSR
 19782 MacArthur Blvd., Suite 365
 Irvine, CA 92715
 ATTN: Mr. Bradley Strauch

ANALYSIS NO.: G-8906019-001/007
 ANALYSES: EPA Methods 601 & 624
 DATE SAMPLED: 28-Feb-1989 to 01-Mar-1989
 DATE SAMPLE REC'D: 01-Mar-1989
 PROJECT: #5500-002-101
 Quarterly Sampling
 Santa Fe Springs, CA

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8906019-001/007 shown above.

The samples were received by CRL in a chilled state, intact, and with the chain-of-custody record attached.

Please note that ND() means not detected at the detection limit expressed within the parentheses.


 REVIEWED


 APPROVED

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-001
Date Sampled: 28-FEB-1989
Date Sample Rec'd: 1-MAR-1989
Date Analyzed: 6-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA
Sample ID: MW-101

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	20
Bromomethane	ND	ND	20
Vinyl Chloride	ND	ND	20
Chloroethane	ND	ND	20
Methylene Chloride	ND	ND	20
1,1-Dichloroethene	ND	ND	20
1,1-Dichloroethane	ND	ND	20
trans-1,2-Dichloroethene	ND	ND	20
Chloroform	ND	ND	20
1,2-Dichloroethane	ND	ND	20
1,1,1-Trichloroethane	ND	ND	20
Carbon Tetrachloride	ND	ND	20
Bromodichloromethane	ND	ND	20
Trichloroethene	ND	ND	20
Dibromochloromethane	ND	ND	20
1,1,2-Trichloroethane	ND	ND	20
cis-1,3-Dichloropropene	ND	ND	20
2-Chloroethylvinyl ether	ND	ND	20
Bromoform	ND	ND	20
Tetrachloroethene	ND	ND	20
1,1,2,2-Tetrachloroethane	ND	ND	20
Chlorobenzene	ND	ND	20
1,2-Dichlorobenzene	ND	ND	20
1,3-Dichlorobenzene	ND	ND	20
1,4-Dichlorobenzene	ND	ND	20

Note: Higher detection limits due to sample matrix.

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-002
Date Sampled: 28-FEB-1989
Date Sample Rec'd: 1-MAR-1989
Date Analyzed: 6-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA
Sample ID: MW-103

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	20
Bromomethane	ND	ND	20
Vinyl Chloride	ND	ND	20
Chloroethane	ND	ND	20
Methylene Chloride	ND	ND	20
1,1-Dichloroethene	ND	ND	20
1,1-Dichloroethane	ND	ND	20
trans-1,2-Dichloroethene	ND	ND	20
Chloroform	ND	ND	20
1,2-Dichloroethane	ND	ND	20
1,1,1-Trichloroethane	ND	ND	20
Carbon Tetrachloride	ND	ND	20
Bromodichloromethane	ND	ND	20
Trichloroethene	ND	ND	20
Dibromochloromethane	ND	ND	20
1,1,2-Trichloroethane	ND	ND	20
cis-1,3-Dichloropropene	ND	ND	20
2-Chloroethylvinyl ether	ND	ND	20
Bromoform	ND	ND	20
Tetrachloroethene	ND	ND	20
1,1,2,2-Tetrachloroethane	ND	ND	20
Chlorobenzene	ND	ND	20
1,2-Dichlorobenzene	ND	ND	20
1,3-Dichlorobenzene	ND	ND	20
1,4-Dichlorobenzene	ND	ND	20

Note: Higher detection limits due to sample matrix.

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-003
Date Sampled: 1-MAR-1989
Date Sample Rec'd: 1-MAR-1989
Date Analyzed: 6-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA
Sample ID: MW-104

Halogenated Volatile Organics, EPA 601

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-004
Date Sampled: 1-MAR-1989
Date Sample Rec'd: 1-MAR-1989
Date Analyzed: 6-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA
Sample ID: MW-204

Halogenated Volatile Organics, EPA 601

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	1.	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	4.	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-005
Date Sampled: 1-MAR-1989
Date Sample Rec'd: 1-MAR-1989
Date Analyzed: 10-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA
Sample ID: MW-203

Halogenated Volatile Organics, EPA 601

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	35.	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-006
Date Sampled: 1-MAR-1989
Date Sample Rec'd: 1-MAR-1989
Date Analyzed: 10-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA
Sample ID: MW-001

Halogenated Volatile Organics, EPA 601

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
Trichloroethene	2.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	10	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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FAX: (714) 891-5917

Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-007
Date Sampled: 1-MAR-1989
Date Sample Rec'd: 1-MAR-1989
Date Analyzed: 6-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA
Sample ID: MW-205

Halogenated Volatile Organics, EPA 601

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-002
Date Sampled: 28-FEB-1989
Date Sample Rec'd: 1-MAR-1989
Date Analyzed: 3-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA
Sample ID: MW-103

Purgeable Organics, EPA 624

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	50
Bromomethane	ND	ND	50
Vinyl Chloride	ND	ND	50
Chloroethane	ND	ND	50
Methylene Chloride	ND	ND	20
Acetone	ND	ND	50
Carbon Disulfide	ND	ND	20
1,1-Dichloroethene	ND	ND	20
1,1-Dichloroethane	ND	ND	20
trans-1,2-Dichloroethene	ND	ND	20
Chloroform	ND	ND	20
1,2-Dichloroethane	ND	ND	20
2-Butanone	ND	ND	50
1,1,1-Trichloroethane	ND	ND	20
Carbon Tetrachloride	ND	ND	20
Vinyl Acetate	ND	ND	50
Bromodichloromethane	ND	ND	20
1,2-Dichloropropane	ND	ND	20
trans-1,3-Dichloropropene	ND	ND	20
Trichloroethene	ND	ND	20
Dibromochloromethane	ND	ND	20
1,1,2-Trichloroethane	ND	ND	20
Benzene	940.	ND	20
cis-1,3-Dichloropropene	ND	ND	20
2-Chloroethylvinyl ether	ND	ND	50
Bromoform	ND	ND	20
4-Methyl-2-pentanone	ND	ND	50
2-Hexanone	ND	ND	50
Tetrachloroethene	ND	ND	20
1,1,2,2-Tetrachloroethane	ND	ND	20
Toluene	ND	ND	20
Chlorobenzene	ND	ND	20
Ethylbenzene	ND	ND	20
Styrene	ND	ND	20
Xylenes, Total	ND	ND	20

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FAX: (714) 891-5917

Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-003
Date Sampled: 1-MAR-1989
Date Sample Rec'd: 1-MAR-1989
Date Analyzed: 2-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA
Sample ID: MW-104

Purgeable Organics, EPA 624

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

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Enseco - CRL / South Coast

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FAX: (714) 891-5917

Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-004
Date Sampled: 1-MAR-1989
Date Sample Rec'd: 1-MAR-1989
Date Analyzed: 2-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA
Sample ID: MW-204

Purgeable Organics, EPA 624

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	7.	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	39.	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-005
Date Sampled: 1-MAR-1989
Date Sample Rec'd: 1-MAR-1989
Date Analyzed: 3-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA
Sample ID: MW-203

Purgeable Organics, EPA 624

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	110.	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-006
Date Sampled: 1-MAR-1989
Date Sample Rec'd: 1-MAR-1989
Date Analyzed: 2-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA
Sample ID: MW-001

Purgeable Organics, EPA 624

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-007
Date Sampled: 1-MAR-1989
Date Sample Rec'd: 1-MAR-1989
Date Analyzed: 3-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA
Sample ID: MW-205

Purgeable Organics, EPA 624

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	40.	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

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FAX: (714) 891-5917

Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906019-001/007
Date Sampled: 28-FEB-1989
1-MAR-1989
Date Sample Rec'd: 1-MAR-1989
Sample Type: LIQUID

Project: 5500-002-101 QUARTERLY SAMPLING/SANTA FE SPRINGS, CA

QA/QC Summary

Date	Parameter (Method)	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
6-MAR-1989	1,1-DICHLOROETHENE (EPA 601)	79	60-120	40.	40
6-MAR-1989	CHLOROBENZENE (EPA 601)	71	60-120	11.	40
6-MAR-1989	TRICHLOROETHENE (EPA 601)	78	60-120	35.	40
2,3-MAR-1989	1,1-DICHLOROETHENE (EPA 624)	91	68-125	0.	15
2,3-MAR-1989	BENZENE (EPA 624)	95	85-110	1.	16
2,3-MAR-1989	CHLOROBENZENE (EPA 624)	111	88-110	0.	15
2,3-MAR-1989	TOLUENE (EPA 624)	95	85-112	0.	18
2,3-MAR-1989	TRICHLOROETHENE (EPA 624)	99	85-115	0.	19
10-MAR-1989	1,1-DICHLOROETHENE (EPA 601)	96	60-120	4.	40
10-MAR-1989	CHLOROBENZENE (EPA 601)	88	60-120	9.	40
10-MAR-1989	TRICHLOROETHENE (EPA 601)	98	60-120	1.	40

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March 9, 1989

ENSR
19782 MacArthur Blvd., Suite 365
Irvine, CA 92715
ATTN: Mr. Bradley Strauch


ANALYSIS NO.: G-8906111-001/005
ANALYSES: EPA Methods 601 & 624
DATE SAMPLED: 2-MAR-1989
DATE SAMPLE REC'D: 2-MAR-1989
PROJECT: Quarterly Sampling/5500-002-101

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8906111-001/005 shown above.

The samples were received by CRL in a chilled state, intact, and with the chain-of-custody record attached.

Solid samples are reported on an "as received" basis.

Please note that ND() means not detected at the detection limit expressed within the parentheses.



REVIEWED

APPROVED

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906111-001
Date Sampled: 2-MAR-1989
Date Sample Rec'd: 2-MAR-1989
Date Analyzed: 6-MAR-1989
Sample Type: LIQUID

Project: (5500-002-101) QUARTERLY SAMPLING
Sample ID: MW-201

Halogenated Volatile Organics, EPA 601

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	10
1,1-Dichloroethene	ND	ND	10
1,1-Dichloroethane	ND	ND	10
trans-1,2-Dichloroethene	ND	ND	10
Chloroform	ND	ND	10
1,2-Dichloroethane	ND	ND	10
1,1,1-Trichloroethane	ND	ND	10
Carbon Tetrachloride	ND	ND	10
Bromodichloromethane	ND	ND	10
Trichloroethene	ND	ND	10
Dibromochloromethane	ND	ND	10
1,1,2-Trichloroethane	ND	ND	10
cis-1,3-Dichloropropene	ND	ND	10
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	10
Tetrachloroethene	ND	ND	10
1,1,2,2-Tetrachloroethane	ND	ND	10
Chlorobenzene	ND	ND	10
1,2-Dichlorobenzene	ND	ND	10
1,3-Dichlorobenzene	ND	ND	10
1,4-Dichlorobenzene	ND	ND	10

NOTE: Higher detection limits due to sample matrix.

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FAX: (714) 891-5917

Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906111-002
Date Sampled: 2-MAR-1989
Date Sample Rec'd: 2-MAR-1989
Date Analyzed: 6-MAR-1989
Sample Type: LIQUID

Project: (5500-002-101) QUARTERLY SAMPLING
Sample ID: MW-503

Halogenated Volatile Organics, EPA 601

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	20
Bromomethane	ND	ND	20
Vinyl Chloride	ND	ND	20
Chloroethane	ND	ND	20
Methylene Chloride	ND	ND	20
1,1-Dichloroethene	ND	ND	20
1,1-Dichloroethane	ND	ND	20
trans-1,2-Dichloroethene	ND	ND	20
Chloroform	ND	ND	20
1,2-Dichloroethane	ND	ND	20
1,1,1-Trichloroethane	ND	ND	20
Carbon Tetrachloride	ND	ND	20
Bromodichloromethane	ND	ND	20
Trichloroethene	ND	ND	20
Dibromochloromethane	ND	ND	20
1,1,2-Trichloroethane	ND	ND	20
cis-1,3-Dichloropropene	ND	ND	20
2-Chloroethylvinyl ether	ND	ND	20
Bromoform	ND	ND	20
Tetrachloroethene	ND	ND	20
1,1,2,2-Tetrachloroethane	ND	ND	20
Chlorobenzene	ND	ND	20
1,2-Dichlorobenzene	ND	ND	20
1,3-Dichlorobenzene	ND	ND	20
1,4-Dichlorobenzene	ND	ND	20

NOTE: Higher detection limits due to sample matrix.

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906111-003
Date Sampled: 2-MAR-1989
Date Sample Rec'd: 2-MAR-1989
Date Analyzed: 6-MAR-1989
Sample Type: LIQUID

Project: (5500-002-101) QUARTERLY SAMPLING
Sample ID: MW-206

Halogenated Volatile Organics, EPA 601

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	50
Bromomethane	ND	ND	50
Vinyl Chloride	ND	ND	50
Chloroethane	ND	ND	50
Methylene Chloride	ND	ND	50
1,1-Dichloroethene	ND	ND	50
1,1-Dichloroethane	ND	ND	50
trans-1,2-Dichloroethene	ND	ND	50
Chloroform	ND	ND	50
1,2-Dichloroethane	ND	ND	50
1,1,1-Trichloroethane	ND	ND	50
Carbon Tetrachloride	ND	ND	50
Bromodichloromethane	ND	ND	50
Trichloroethene	ND	ND	50
Dibromochloromethane	ND	ND	50
1,1,2-Trichloroethane	ND	ND	50
cis-1,3-Dichloropropene	ND	ND	50
2-Chloroethylvinyl ether	ND	ND	50
Bromoform	ND	ND	50
Tetrachloroethene	ND	ND	50
1,1,2,2-Tetrachloroethane	ND	ND	50
Chlorobenzene	ND	ND	50
1,2-Dichlorobenzene	ND	ND	50
1,3-Dichlorobenzene	ND	ND	50
1,4-Dichlorobenzene	ND	ND	50

NOTE: Higher detection limits due to sample matrix.

Enseco - CRL / South Coast

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FAX: (714) 891-5917

Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906111-004
Date Sampled: 2-MAR-1989
Date Sample Rec'd: 2-MAR-1989
Date Analyzed: 6-MAR-1989
Sample Type: LIQUID

Project: (5500-002-101) QUARTERLY SAMPLING
Sample ID: MW-502

Halogenated Volatile Organics, EPA 601

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	20
Bromomethane	ND	ND	20
Vinyl Chloride	ND	ND	20
Chloroethane	ND	ND	20
Methylene Chloride	ND	ND	20
1,1-Dichloroethene	ND	ND	20
1,1-Dichloroethane	ND	ND	20
trans-1,2-Dichloroethene	ND	ND	20
Chloroform	ND	ND	20
1,2-Dichloroethane	ND	ND	20
1,1,1-Trichloroethane	ND	ND	20
Carbon Tetrachloride	ND	ND	20
Bromodichloromethane	ND	ND	20
Trichloroethene	ND	ND	20
Dibromochloromethane	ND	ND	20
1,1,2-Trichloroethane	ND	ND	20
cis-1,3-Dichloropropene	ND	ND	20
2-Chloroethylvinyl ether	ND	ND	20
Bromoform	ND	ND	20
Tetrachloroethene	ND	ND	20
1,1,2,2-Tetrachloroethane	ND	ND	20
Chlorobenzene	ND	ND	20
1,2-Dichlorobenzene	ND	ND	20
1,3-Dichlorobenzene	ND	ND	20
1,4-Dichlorobenzene	ND	ND	20

NOTE: Higher detection limit due to sample matrix.

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FAX: (714) 891-5917

Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906111-005
Date Sampled: 2-MAR-1989
Date Sample Rec'd: 2-MAR-1989
Date Analyzed: 6-MAR-1989
Sample Type: LIQUID

Project: (5500-002-101) QUARTERLY SAMPLING
Sample ID: MW-002

Halogenated Volatile Organics, EPA 601

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	2.	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906111-001
Date Sampled: 2-MAR-1989
Date Sample Rec'd: 2-MAR-1989
Date Analyzed: 6-MAR-1989
Sample Type: LIQUID

Project: (5500-002-101) QUARTERLY SAMPLING
Sample ID: MW-201

Purgeable Organics, EPA 624

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	210.	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	27.	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	24.	ND	5
Styrene	ND	ND	5
Xylenes, Total	47.	ND	5

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FAX: (714) 891-5917

Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906111-002
Date Sampled: 2-MAR-1989
Date Sample Rec'd: 2-MAR-1989
Date Analyzed: 6-MAR-1989
Sample Type: LIQUID

Project: (5500-002-101) QUARTERLY SAMPLING
Sample ID: MW-503

Purgeable Organics, EPA 624

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	50
Bromomethane	ND	ND	50
Vinyl Chloride	ND	ND	50
Chloroethane	ND	ND	50
Methylene Chloride	ND	ND	50
Acetone	ND	ND	20
Carbon Disulfide	ND	ND	50
1,1-Dichloroethene	ND	ND	50
1,1-Dichloroethane	ND	ND	50
trans-1,2-Dichloroethene	ND	ND	50
Chloroform	ND	ND	50
1,2-Dichloroethane	ND	ND	50
2-Butanone	ND	ND	20
1,1,1-Trichloroethane	ND	ND	50
Carbon Tetrachloride	ND	ND	50
Vinyl Acetate	ND	ND	20
Bromodichloromethane	ND	ND	50
1,2-Dichloropropane	ND	ND	50
trans-1,3-Dichloropropene	ND	ND	50
Trichloroethene	ND	ND	50
Dibromochloromethane	ND	ND	50
1,1,2-Trichloroethane	ND	ND	50
Benzene	400.	ND	50
cis-1,3-Dichloropropene	ND	ND	50
2-Chloroethylvinyl ether	ND	ND	20
Bromoform	ND	ND	50
4-Methyl-2-pentanone	ND	ND	20
2-Hexanone	ND	ND	20
Tetrachloroethene	ND	ND	50
1,1,2,2-Tetrachloroethane	ND	ND	50
Toluene	190.	ND	50
Chlorobenzene	ND	ND	50
Ethylbenzene	360.	ND	50
Styrene	ND	ND	50
Xylenes, Total	750.	ND	50

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FAX: (714) 891-3917

Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906111-003
Date Sampled: 2-MAR-1989
Date Sample Rec'd: 2-MAR-1989
Date Analyzed: 3-MAR-1989
Sample Type: LIQUID

Project: (5500-002-101) QUARTERLY SAMPLING
Sample ID: MW-206

Purgeable Organics, EPA 624

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	500
Bromomethane	ND	ND	500
Vinyl Chloride	ND	ND	500
Chloroethane	ND	ND	500
Methylene Chloride	ND	ND	200
Acetone	ND	ND	500
Carbon Disulfide	ND	ND	200
1,1-Dichloroethene	ND	ND	200
1,1-Dichloroethane	ND	ND	200
trans-1,2-Dichloroethene	ND	ND	200
Chloroform	ND	ND	200
1,2-Dichloroethane	ND	ND	200
2-Butanone	ND	ND	500
1,1,1-Trichloroethane	ND	ND	200
Carbon Tetrachloride	ND	ND	200
Vinyl Acetate	ND	ND	500
Bromodichloromethane	ND	ND	200
1,2-Dichloropropane	ND	ND	200
trans-1,3-Dichloropropene	ND	ND	200
Trichloroethene	ND	ND	200
Dibromochloromethane	ND	ND	200
1,1,2-Trichloroethane	ND	ND	200
Benzene	2,700.	ND	200
cis-1,3-Dichloropropene	ND	ND	200
2-Chloroethylvinyl ether	ND	ND	500
Bromoform	ND	ND	200
4-Methyl-2-pentanone	ND	ND	500
2-Hexanone	ND	ND	500
Tetrachloroethene	ND	ND	200
1,1,2,2-Tetrachloroethane	ND	ND	200
Toluene	3,200.	ND	200
Chlorobenzene	ND	ND	200
Ethylbenzene	2,400.	ND	200
Styrene	ND	ND	200
Xylenes, Total	12,000.	ND	200

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906111-004
Date Sampled: 2-MAR-1989
Date Sample Rec'd: 2-MAR-1989
Date Analyzed: 3-MAR-1989
Sample Type: LIQUID

Project: (5500-002-101) QUARTERLY SAMPLING
Sample ID: MW-502

Purgeable Organics, EPA 624

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	500
Bromomethane	ND	ND	500
Vinyl Chloride	ND	ND	500
Chloroethane	ND	ND	500
Methylene Chloride	ND	ND	200
Acetone	ND	ND	500
Carbon Disulfide	ND	ND	200
1,1-Dichloroethene	ND	ND	200
1,1-Dichloroethane	ND	ND	200
trans-1,2-Dichloroethene	ND	ND	200
Chloroform	ND	ND	200
1,2-Dichloroethane	ND	ND	200
2-Butanone	ND	ND	500
1,1,1-Trichloroethane	ND	ND	200
Carbon Tetrachloride	ND	ND	200
Vinyl Acetate	ND	ND	500
Bromodichloromethane	ND	ND	200
1,2-Dichloropropane	ND	ND	200
trans-1,3-Dichloropropene	ND	ND	200
Trichloroethene	ND	ND	200
Dibromochloromethane	ND	ND	200
1,1,2-Trichloroethane	ND	ND	200
Benzene	5,300.	ND	200
cis-1,3-Dichloropropene	ND	ND	200
2-Chloroethylvinyl ether	ND	ND	500
Bromoform	ND	ND	200
4-Methyl-2-pentanone	ND	ND	500
2-Hexanone	ND	ND	500
Tetrachloroethene	ND	ND	200
1,1,2,2-Tetrachloroethane	ND	ND	200
Toluene	1,200.	ND	200
Chlorobenzene	ND	ND	200
Ethylbenzene	1,900.	ND	200
Styrene	ND	ND	200
Xylenes, Total	7,100.	ND	200

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch

Analysis No.: G-8906111-005
Date Sampled: 2-MAR-1989
Date Sample Rec'd: 2-MAR-1989
Date Analyzed: 3-MAR-1989
Sample Type: LIQUID

Project: (5500-002-101) QUARTERLY SAMPLING
Sample ID: MW-002

Purgeable Organics, EPA 624

Units: ug/L

Analysis	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Acetone	ND	ND	10
Carbon Disulfide	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	5
Chloroform	ND	ND	5
1,2-Dichloroethane	ND	ND	5
2-Butanone	ND	ND	10
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Vinyl Acetate	ND	ND	10
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
cis-1,3-Dichloropropene	ND	ND	5
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	5
4-Methyl-2-pentanone	ND	ND	10
2-Hexanone	ND	ND	10
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylenes, Total	ND	ND	5

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Laboratory Report

ENSR
19782 MacArthur Blvd., Suite 365
Irvine,, CA 92715
ATTN: Mr. Bradley Strauch
Project: (5500-002-101) QUARTERLY SAMPLING

Analysis No.: G-8906111-001/005
Date Sampled: 2-MAR-1989
Date Sample Rec'd: 2-MAR-1989
Sample Type: LIQUID

QA/QC Summary

Date	Parameter (Method)	Average Matrix Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
6-MAR-1989	1,1-DICHLOROETHENE (EPA 601)	75	60-120	1.	40
6-MAR-1989	CHLOROBENZENE (EPA 601)	106	60-120	0.	40
6-MAR-1989	TRICHLOROETHENE (EPA 601)	117	60-120	1.	40
6-MAR-1989	1,1-DICHLOROETHENE (EPA 624)	78	68-125	10.	15
3-FEB-1989	1,1-DICHLOROETHENE (EPA 624)	91	68-125	0.	15
6-MAR-1989	BENZENE (EPA 624)	85	85-110	6.	16
3-FEB-1989	BENZENE (EPA 624)	95	85-110	1.	16
6-MAR-1989	CHLOROBENZENE (EPA 624)	101	88-110	8.	15
3-FEB-1989	CHLOROBENZENE (EPA 624)	111	88-110	0.	15
3-FEB-1989	TOLUENE (EPA 624)	95	85-112	0.	18
6-MAR-1989	TOLUENE (EPA 624)	85	85-112	1.	18
3-FEB-1989	TRICHLOROETHENE (EPA 624)	99	85-115	0.	19
6-MAR-1989	TRICHLOROETHENE (EPA 624)	96	85-115	8.	19

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